Abstract Submitted
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Formation of molecules from a Cs Bose-Einstein condensate VLADIMIR YUROVSKY, ABRAHAM BEN-REUVEN, School of Chemistry, Tel Aviv University — An analysis was carried out of the recent Innsbruck experiments [1] on the conversion to molecules of an expanding Bose-Einstein condensate of Cs atoms, using an extremely weak Feshbach resonance. The theory, based on the approach of [2], takes into account atom-molecule and molecule-molecule deactivating collisions. It describes results observed for both ramping and switching schemes used in the experiments, including the exceptionally effective conversion achieved in the switching scheme. A fit of the theory to the experimental data provides an estimate of the resonance strength and the deactivation rates.

1. M. Mark, T. Kraemer, J. Herbig, C. Chin, H.-C. Nägerl, and R. Grimm, cond-mat/0409737.
2. V. A. Yurovsky and A. Ben-Reuven, Phys. Rev. A **70**, 013613 (2004).

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